

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Transition from TTY to Real-Time Text Technology)	CG Docket No. 16-145
)	
Petition for Rulemaking to Update the Commission’s Rules for Access to Support the Transition from TTY to Real-Time Text Technology, and Petition for Waiver of Rules Requiring Support of TTY Technology)	GN Docket No. 15-178
)	
)	

**REPLY COMMENTS OF THE ALLIANCE FOR
TELECOMMUNICATIONS INDUSTRY SOLUTIONS**

The Alliance for Telecommunications Industry Solutions (ATIS), on behalf of its Emergency Services Interconnection Forum (ESIF), Packet Technologies and Systems Committee (PTSC), and Wireless Technologies and Systems Committee (WTSC), hereby submits these reply comments in response to *Further Notice of Proposed Rulemaking (FNPRM)*, released December 16, 2016 in the above-referenced dockets. As a key stakeholder in the development of technical and operational standards pertaining to Real-Time Text (RTT) to 911, ATIS is pleased to have the opportunity to respond to the comments in this proceeding

I. BACKGROUND

ATIS is a global standards development and technical planning organization that leads, develops and promotes worldwide technical and operations standards for information, entertainment, and communications technologies. A significant focus of ATIS work is on emergency services, including key work programs within ATIS’ ESIF, PTSC, and WTSC. This

work includes creating ATIS standards for RTT mobile device behavior and an end-to-end service description. ATIS' comments on this matter reflect input from these committees.

- **ESIF** serves as the primary forum for the telecommunications industry, public safety and other stakeholders to identify and resolve recognized technical and operational interconnection issues related to the delivery of E911 and NG911 services.
- **PTSC** develops and recommends standards and technical reports related to services, architectures, and signaling. PTSC's work programs focus on issues such as Emergency Telecommunications Service (ETS), cybersecurity, IP-to-IP interconnection, lawfully authorized electronic surveillance and the evolution of the public switched telephone network (PSTN).
- **WTSC** coordinates, develops and recommends standards and technical reports relating to wireless/mobile telecommunications networks. WTSC is the primary industry committee within ATIS that focuses on next generation wireless issues, including those wireless issues that are specific to the implementations of LTE in the U.S.

II. REPLY COMMENTS

ATIS has been actively working to resolve technical issues that will allow for the consistent implementation of RTT and has published key industry standards pertaining to RTT. ATIS' reply comments provide an update on ATIS' RTT-related work programs and respond to specific comments to ensure that any new RTT rules are aligned with existing industry work and technically feasible.

A. Update on RTT Work

Among the RTT-related work that the industry has completed is the *ATIS Technical Report on the Support of TTY Service Over IP Using Global Text Telephony*.¹ This 2015 report, which explains how Global Text Telephony (GTT) can be provided over service providers' IP

¹ ATIS-1000068. This document is available from the ATIS Documents Center at <https://www.atis.org/docstore/product.aspx?id=28244>.

Multimedia Subsystem (IMS) networks, resulted in modifications to industry requirements for devices to signal their media capabilities to the network.

Another completed industry work program is ATIS' recently published *Standard on Real Time Text Mobile Device Behavior*.² This standard specifies certain aspects of the mobile device behavior for handling RTT to facilitate communication between mobile devices (including emergency services) across multiple Commercial Mobile Service Providers. It identifies the behavior requirements of a device performing RTT user-to-user communication within and between service provider networks, including: (1) minimum requirements for RTT-capable device user interfaces; (2) mobile device behavior in support of emergency services requirements; and (3) minimum RTT user options.

ATIS is also working on an RTT end-to-end service description specification, which is expected to be completed later this year. This specification will facilitate a consistent use of RTT among multiple service providers by describing the service interactions between RTT and IP multimedia subsystem (IMS). The specification will define end-to-end RTT service requirements such as character error rate, transmission delay, and transmission rate, and include an analysis of a variety of RTT use cases.

B. Response to Commenters

ATIS notes that the Boulder Regional Emergency Telephone Service Authority (BRETSA) recommends in its comments that the Commission require RTT to be backward compatible with SMS text messaging so that dispatchers can scan messages and users can communicate with those without RTT capability. According to BRETSA, "RTT fall-back to true SMS text message would allow dispatchers to scan text message and prioritize calls based on the

² ATIS-0700029. This document is available from the ATIS Documents Center at <https://www.atis.org/docstore/product.aspx?id=28300>.

urgency of the matter being reported.” ATIS believes that this recommendation is confusing and may not be technically feasible.

ATIS is not certain what BRETSA intends by the concept of an “RTT fall-back.” RTT and SMS are two different technologies – end-users make a choice regarding which technology to use and there is no way for service providers to automatically revert messages sent using one technology to another. An RTT message therefore cannot automatically fall back to SMS. However, ATIS does note that end-users do have the opportunity to choose to use SMS in cases where RTT messaging is not available (or vice-versa). Finally, ATIS urges the Commission to acknowledge that SMS-to-911 is an interim solution and not to adopt rules that would require carriers to continue to support SMS indefinitely. As ATIS has reported previously to the Commission, long-term technologies (e.g., Multimedia Emergency Services (MMES)), are being developed that will supersede the interim solution. The Commission should allow public safety and the industry to focus resources on the implementation of longer-term solutions and not expand obligations regarding these interim solutions.

ATIS similarly has concerns pertaining to the technical feasibility of the integration of RTT and Internet Protocol Captioned Telephone Service (IP-CTS), an issue raised by ClearCaptions LLC (ClearCaptions). ClearCaptions recommends that the Commission carefully evaluate the technical and practical feasibility of incorporating RTT into IP-CTS, and limit the scope of any RTT/IP-CTS integration requirements accordingly.³ ATIS notes that, based on the way that RTT is currently specified, the incorporation of RTT into IP-CTS may not be feasible. ATIS further notes that RTT multimedia integration remains an unresolved issue that would require the involvement of stakeholders beyond carriers, including particularly those involved in relay services.

³ ClearCaptions Comments at p. 2.

The National Association of State 911 Administrators (NASNA) in its comments recommends public education to “call if you can, text if you can’t.”⁴ In support of this recommendation, NASNA notes that end-users in areas where RTT-to-911 technology has not been implemented would not receive bounce-back message in the case of RTT-to-TTY conversions. While ATIS supports consumer education to call rather than text 911, it notes that there would be no bounce-back messages for RTT-to-TTY conversions as PSAPs are required to support TTY. If a message originates as RTT, it must be converted to TTY before handoff to the PSAP if the PSAP is not capable of receiving IP RTT communications directly. Therefore, the PSAP’s ability to support RTT (or not) would not be a factor and there would be no reason that a “bounce-back” message would be necessary.

Further, ATIS notes that NASNA recommends that the Commission reassess its backward-compatibility requirement after the sunset of the Public Switched Telephone Network (PSTN) and the transition of all consumers to IP-based wireless and wireline networks. ATIS notes that this recommendation is problematic in that, once the PSTN has sunset, the ability for consumers to originate or receive communications on TTY will no longer be possible because it is a circuit switched technology, not IP. Therefore, backward compatibility will no longer be feasible once the PSTN transition is completed.

Finally, in its *FNPRM*, the Commission seeks further comment on the extent to which offering a block mode option will enhance service providers’ and manufacturers ability to meet Parts 6, 7 and 14 performance objectives for people with certain types of disabilities.⁵ ATIS notes that block mode is not specified within the Internet Engineering Task Force’s (IETF) Request for Comments (RFC) 4103, Real-time Transport Protocol Payload for Text

⁴ NASNA Comment at p. 3.

⁵ *FNPRM* at ¶89.

Conversation (2005), and RFC 4103 has been the focus of RTT technical work within ATIS.

ATIS further notes that there may be challenges associated with the proposed block mode option, including concerns with whether block mode may conflict with existing Commission RTT rules.

ATIS believes that technical issues associated with block mode are more appropriately addressed through consensus-based industry technical bodies rather than via regulatory mandates.

III. Conclusion

ATIS appreciates the opportunity to provide its input to the *FNPRM* and urges the Commission to consider the recommendations above.

Respectfully submitted,



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